

PEABODY WATER WELL NAVAJO NO. 6 W.W.  
NW/NE Sec 26-36N-18E, Navajo Co. 179

P-W

County Navajo

Area Black Mesa

Lease No. \_\_\_\_\_

Well Name PEABODY COAL COMPANY WATER WELL NAVAJO NO. 6

Location NW/NE Sec 26 Twp 36N Range 18E Footage Est. 850' to 1950' to 1

Elev 6686 K13 6674 GR Spud Completed Total  
Date Abandon 6/1968 Depth 3573

Contractor \_\_\_\_\_

Casing Size \_\_\_\_\_ Depth \_\_\_\_\_ Cement \_\_\_\_\_  
Drilled by Rotary \_\_\_\_\_  
Cable Tool \_\_\_\_\_

Production Horizon \_\_\_\_\_

Initial Production \_\_\_\_\_

REMARKS \_\_\_\_\_

Elec Logs \_\_\_\_\_ INDUCTION GAMMA RAY LOG \_\_\_\_\_

Applic. \_\_\_\_\_ Plugging \_\_\_\_\_ Completion \_\_\_\_\_  
to Plug \_\_\_\_\_ Record \_\_\_\_\_ Report \_\_\_\_\_

Sample Log \_\_\_\_\_

Sample Descript. \_\_\_\_\_

Sample Set \_\_\_\_\_

Core Analysis \_\_\_\_\_

DSTs \_\_\_\_\_

Water well accepted by \_\_\_\_\_

Bond Co. \_\_\_\_\_

& No. \_\_\_\_\_

Bond Am't \$ \_\_\_\_\_ Cancelled \_\_\_\_\_ Date \_\_\_\_\_

Organization Report \_\_\_\_\_

Filing Receipt \_\_\_\_\_ Dated \_\_\_\_\_ Well Book \_\_\_\_\_ Plat Book \_\_\_\_\_

Loc. Plat \_\_\_\_\_ Dedication \_\_\_\_\_

API NO. \_\_\_\_\_

Permit Number \_\_\_\_\_ Date Issued \_\_\_\_\_

W.W. 179

WN 179

NAVAJO No. 6 WELL  
LITHOLOGIC SAMPLE LOG

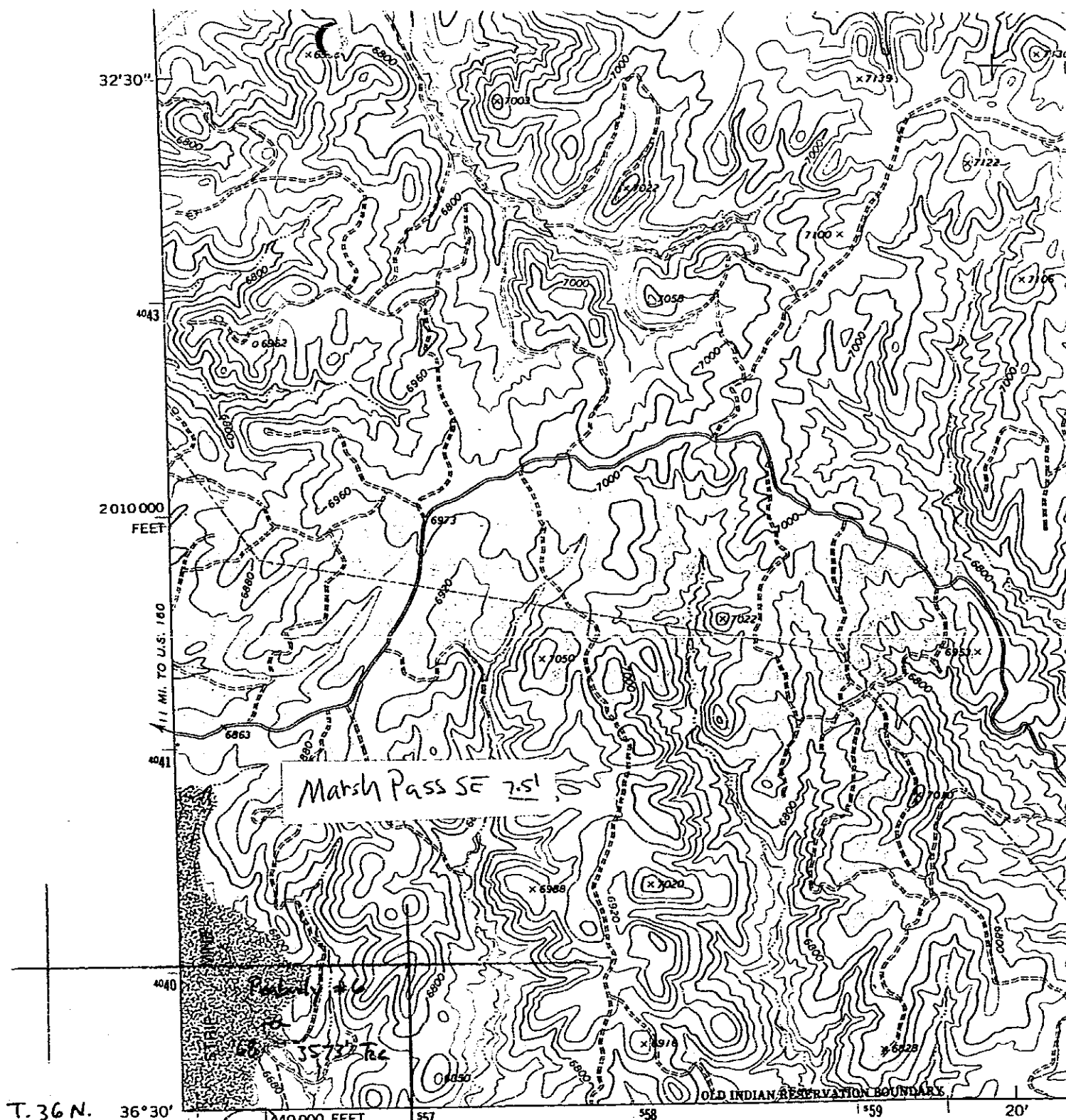
Depth Interval		Lithologic Description
Mesa Verde	48 - 190 (?)	Sandstone, very fine grained and black carbonaceous shale.
	190 - 240	Same as above, dark gray shale contains pyrite.
	240 - 250	Black shale and coal.
	250 - 260	Sandstone, very fine grain, tight.
	260 - 270	Same as above with 30% coal.
	270 - 290	Sandstone as above with pyrite.
	290 - 300	Sandstone, light, fine to medium grain and black shale.
	300 - 320	Sandstone, shale and coal.
	320 - 420	Sandstone, light, medium to coarse grain.
	420 - 430	Sandstone as above with black shale.
	430 - 450	Coal, dirty.
	450 - 480	Sandstone, light, fine to medium grain and black shale.
	480 - 520	Sandstone, white, very fine grained.
	520 - 530	Sandstone as above with 20% coal.
	530 - 540	Sandstone, white very fine grained and dark gray siltstone.
Mancos	540 - 550	Sandstone, white, very fine grained.
	550 - 560	Shale, dark gray.
	560 - 570	Sandstone, white, medium to coarse grained.
	570 - 590	Sandstone white, fine grained.
	590 - 640 615	Sandstone, white very fine grained.
Mancos	640 - 670	Sandstone as above with black shale.
	670 - 740	Shale, black, 90% with calcite (?).
	740 - 1100	Shale, black with red chert and calcite.
	1100 - 1190	Shale, black.
	1190 - 1220 1210	Shale, black with 10% white fine grained sandstone.
Dakota	1220 - 1240	Shale, black with 20-30% white fine grained sandstone and pyrite.
	1240 - 1260	Sandstone as above (60%) with black shale.
	1260 - 1280	Sandstone, white, medium to coarse grained (60%) with black shale.
	1280 - 1290	Sandstone, white, fine to medium grained with pyrite and black shale.
	1290 - 1300	Sandstone as above with chert fragments and pyrite.
	1300 - 1330	Mancos Cave
	1330 - 1340	Sandstone, white, very fine grained with coarse chert fragments and green shale.

Navajo No. 6 Well (continued)

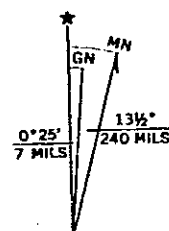
Depth Interval		Lithologic Description
Morrison	1340 - 1350	Sandstone with abundant chert, trace of shale.
	1350 - 1370	Shale, reddish brown and green.
	1370 - 1390	Same as above with pyrite.
	1390 - 1440	Sandstone, white, fine to medium grain, soft.
	1440 - 1450	Siltstone, reddish brown.
	1450 - 1460	Sandstone, white fine to medium grained, soft.
	1460 - 1490	Shale, reddish brown.
	1490 - 1520	Sandstone, reddish brown, very fine grained.
	1520 - 1550	Shale, reddish brown.
	1550 - 1560	Sandstone, medium to coarse grained.
	1560 - 1580	Sandstone as above with chert fragments.
	1580 - 1650	Shale, reddish brown.
	1650 - 1680	Sandstone, medium to coarse grained with chert fragments.
	1680 - 1710	Shale, red.
	1710 - 1740	Mancos cave.
	1740 - 1770	Sandstone, white, fine grained.
Carmel Entrada	1770 - 1780	Cave.
	1780 - 1790	Sandstone as above with cave.
	1790 - 1810	Sandstone as above.
	1810 - 1820	Sandstone as above with cave.
	1820 - 1880	Sandstone as above.
	1880 - 1920	Shale, reddish brown.
	1920 - 2000	Sandstone, very fine grained, soft.
	2000 - 2160	Sandstone, reddish brown, very fine grained.
	2160 - 2200	Cement.
	2200 - 2220	Cement and reddish brown, very fine grained sandstone.
Navajo	2220 - 2260	Sandstone as above.
	2260 - 2270	Cement and sandstone as above.
	2270 - 2280	Shale, chocolate brown.
	2280 - 2290	Shale as above and cement.
	2290 - 2430	Shale, reddish brown.
	2430 - 2450	Sandstone, very fine grained (5%)?
	2450 - 2480	Sandstone (10%)
	2480 - 2500	Sandstone, reddish brown very fine grained, 50%.
Navajo	2500 - 2700	Sandstone, reddish brown to white, very fine grained.
	2700 - 2800	Cement and cave.
	2800 - 2810	Sandstone, pink with 10% cement.
	2810 - 2910	Sandstone, pink.
	2910 - 3010	No description.
	3010 - 3040	Shale, brown, cave.
Navajo	3040 - 3070	Sandstone, white-pink, very fine grained.
	3070 - 3090	Cave ??

Navajo No. 6 Well (continued)

<u>Depth Interval</u>		<u>Lithologic Description</u>
Kayenta	3090 - 3100	Shale, chocolate brown and mottled green, 50% shale as above (5%) with sandstone.
	3110 - 3120	Shale, 50%.
	3120 - 3130	Shale, 10%.
	3130 - 3160	Shale, 20%.
	3160 - 3170	No description.
	3170 - 3180	Shale, 50%.
	3190 - 3240	Shale, reddish brown, 10% cement.
	3240 - 3300	Shale - claystone, bentonitic.
	3300 - 3320	Sandstone, white, very fine grained, 5%.
	3320 - 3410	Sandstone, white-pink, very fine grained, 50%.
Wingate	3410 - 3420	Sandstone, reddish brown-pink, fine medium grained.
	3420 - 3440	Shale, chocolate brown, cave?
	3440 - 3470	Sandstone, 90%.
	3470 - 3510	Sandstone, medium-fine grained.
Chinle	3510 - 3530	Shale, chocolate brown 10% cave?
	3530 - 3550	Shale, chocolate to reddish brown, 60%.
	3550 - 3560	Shale, 80%.

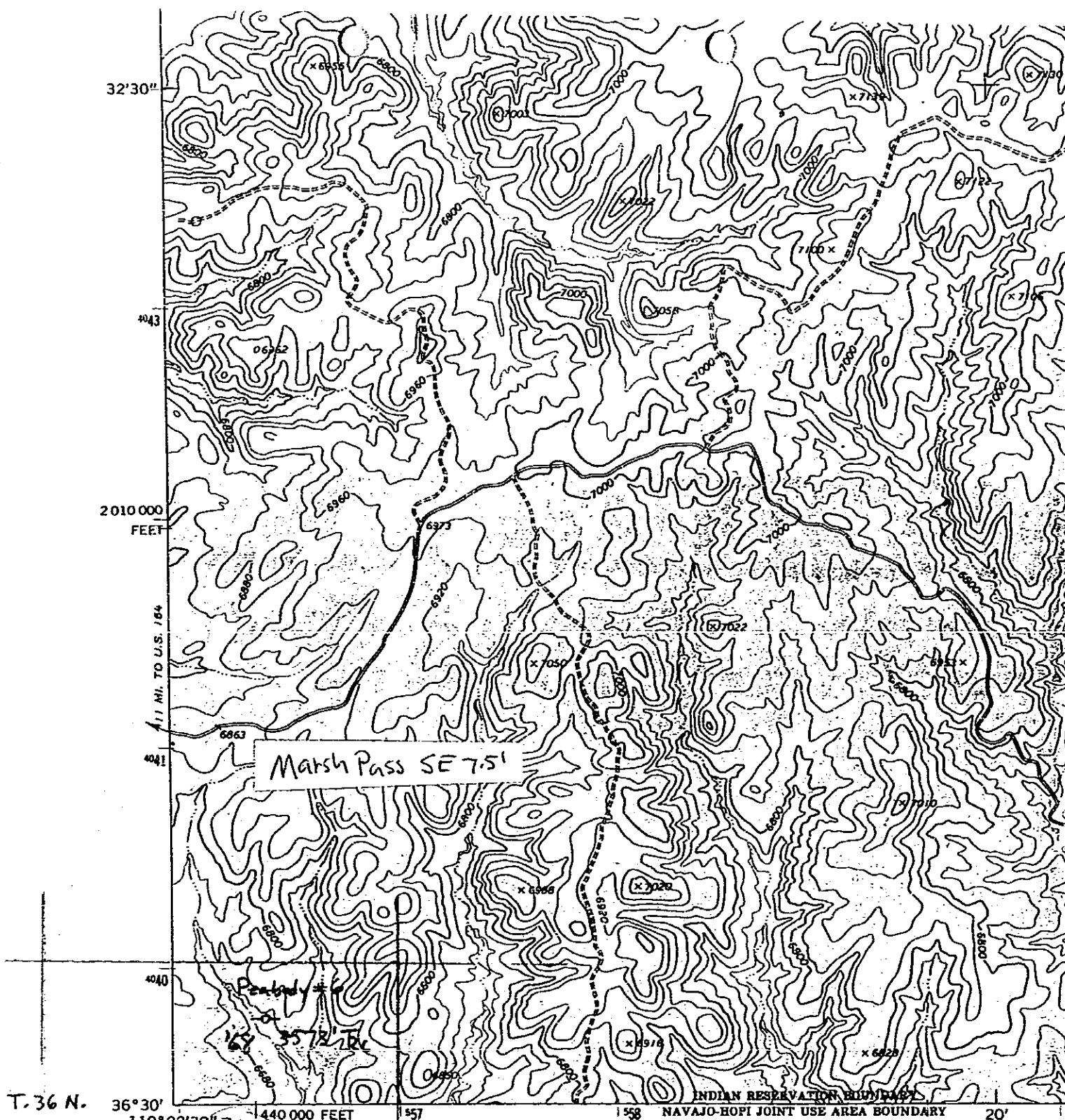


Mapped, edited, and published by the Geological Survey  
 Control by USGS and NOS/NOAA  
 Topography by photogrammetric methods from aerial  
 photographs taken 1967. Field checked 1968  
 Polyconic projection. 1927 North American datum  
 10,000-foot grid based on Arizona coordinate system, east zone  
 1000-meter Universal Transverse Mercator grid ticks,  
 zone 12, shown in blue  
 To place on the predicted North American Datum 1983  
 move the projection lines 3 meters north and  
 62 meters east as shown by dashed corner ticks  
 Land lines have not been established in this area  
 There may be private inholdings within the boundaries of



UTM GRID AND 1982 MAGNETIC NORTH  
 DECLINATION AT CENTER OF SHEET

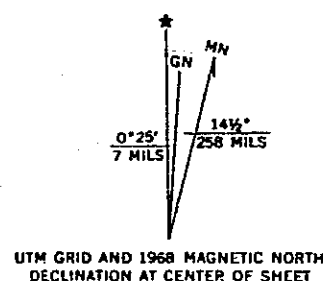
1968 ed.  
 Photo Revised 1982



T. 36 N. 36° 30' 110° 22' 30" 26 440 000 FEET 557 558 NAVAJO-HOPI JOINT USE AREA BOUNDARY 20'

Maped, edited, and published by the Geological Survey  
 Control by USGS and USC&GS  
 Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1968  
 Polyconic projection. 1927 North American datum  
 10,000-foot grid based on Arizona coordinate system, east zone  
 1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue  
 Land lines have not been established in this area

R. 18 E. 1968 ed.



FOR S



OFFICE OF

**Oil and Gas Conservation Commission**

STATE OF ARIZONA

ROOM 202

1624 WEST ADAMS

Phoenix, Arizona 85007

PHONE: 271-5161

October 2, 1969

Gentlemen:

There has been some misunderstanding expressed concerning my letter to you of September 24, 1969 referring to the wells drilled in the Black Mesa area of Navajo County, Arizona, by Peabody Coal Company.

This information was released for you should you wish to publish same.

Yours truly,

*John Bannister*  
John Bannister  
Executive Secretary

Western Oil Reporter  
Oil & Gas Journal  
P.I.  
Utah Oil Report  
Munger Oilgram  
SW Oil & Gas News  
Ariz Natrl Resource Serv



September 29, 1969

Mr. Guido Zecca  
Gallup Blueprint & Engineering Corp.  
303 South 2nd Street  
Gallup, New Mexico 87301

Dear Mr. Zecca:

The Arizona Oil and Gas Conservation Commission is releasing all logs and related information concerning six deep water wells drilled by Peabody Coal Company at Black Mesa, Arizona, on the Navajo Reservation.

Under separate cover we are sending you the sepias of the well logs, and a location plat, on a loan basis.

Our release to industry states that interested individuals may obtain a copy of this material from Gallup Blueprint and Engineering Corporation, 303 South 2nd Street, Gallup, New Mexico, Telephone No. (505) 863-9396.

It is our understanding that you have complete responsibility for the handling and sale of this material, and are prepared to render prompt service.

Very truly yours,

John Bannister  
Executive Secretary

/vb

*Presidential*

September 24, 1969

Mr. Paul Lewis  
Pan American Oil Co.  
501 Airport Drive  
Farmington, New Mexico 87401

Dear Paul:

I attempted to call you earlier today and failed to get through. I would appreciate it if you would release the attached information at your next scout check.

The Commission does have logs on the wells and, as you noted, we made arrangements for the commercial purchase of this information.

Hope to see you soon.

Sincerely,

John Bannister  
Executive Secretary

/vb

Enc.

OFFICE OF  
**Oil and Gas Conservation Commission**  
STATE OF ARIZONA  
ROOM 302  
1624 WEST ADAMS  
Phoenix, Arizona 85007  
PHONE: 271-5161

September 24, 1969

Gentlemen:

The Arizona Oil and Gas Conservation Commission has released all available information concerning six deep water wells drilled since 1965 in the Black Mesa area, Navajo County, Arizona, on the Navajo Reservation, by Peabody Coal Company.

Shows of oil and gas were encountered in the Dakota during the drilling of one well which had 43 feet of indicated log porosity. A heavy oil scum covered the mud pits, and gas bubbles were visible in the flow line. No shows were reported in the other five wells. All of the wells exhibit considerable structural deformation, and all penetrated the Coconino formation.

A packet of information containing logs and a location plat is available from Gallup Blueprint & Engineering Corp., 303 South 2nd St., Gallup, New Mexico 87301, Telephone No. (505) 863-9396.

Yours truly,

John Bannister  
Executive Secretary

/vb

SAMPLE

Mr. Guido Zecca  
Gallup Blueprint & Engineering Corp.  
303 South 2nd Street  
Gallup, New Mexico 87301

Dear Mr. Zecca:

The Arizona Oil and Gas Conservation Commission is releasing all logs and related information concerning six deep water wells drilled by Peabody Coal Company at Black Mesa, Arizona, on the Navajo Reservation.

Under separate cover we are sending you the sepias of the well logs, and a location plat, on a loan basis.

Our release to industry states that interested individuals may obtain a copy of this material from Gallup Blueprint and Engineering Corp., 303 South 2nd Street, Gallup, New Mexico, Telephone No. (505) 863-9396.

It is our understanding that you have complete responsibility for the handling and sale of this material, and are prepared to render prompt service.

Very truly yours,

John Bannister

MINERALS DEPARTMENT

September 22, 1969

Mr. Guido Zecca  
Gallup Blueprint & Engineering Corp.  
303 South 2nd Street  
Gallup, New Mexico 87301

Dear Mr. Zecca:

Delivered herewith are sepias of six wells drilled  
by Peabody Coal Co., at Black Mesa, in Navajo County,  
Arizona.

This material has been released by Peabody  
Coal Co., through the Arizona Oil and Gas Conservation  
Commission, of Phoenix, Arizona. They are preparing a  
letter of verification to you.

Interested operators may contact you for copies  
of this material. This office is not interested whatever  
in the selling or handling of copies purchased by interested  
persons, operators, companies, etc.

The following sepias have been loaned to you  
this date:

Well #1	6 sepias
Well #2	1 sepia
Well #3	1 sepia
Well #4	1 sepia
Well #5	1 sepia
Well #6	1 sepia
<u>TOTAL</u>	<u>11 sepias.</u>

Very truly yours,

/S/ PERRY K. HURLBUT

Perry K. Hurlbut  
Minerals Supervisor

Barnett  
Attachments  
cc: Chrono  
File  
PKH:bjm:9/22/69

Memo to Mr. Bannister

September 22, 1969

Memo from J. Lambert

P. K. Hurlbut called today. He is mailing material on the #1 well. Same cover he is furnishing you a letter for the public release for P. I. and many others. He requests that you release the letter as nearly as he has written it as possible. He says that he has labored hard over the text of this letter and hopes that you will see fit to let it go as is. He also has included a letter that he would like for you to send to blue print company at Gallup. He has no druthers on this particular letter.

He has furnished them sepias of the logs on the #1, 2, 3, 4, 5, and 6 wells on a loan basis and apparently this letter is just the Commission's verification of this situation.

He would like for you to release these letters Wednesday if you have the time and inclination. He will talk to you on Monday the 29th or Tuesday the 30th.

94

9-16-69

John — a  
letter will follow.

Just stick these  
in your files.

Mum's the word  
until I get the rest of  
the facts to you.

About 1 week

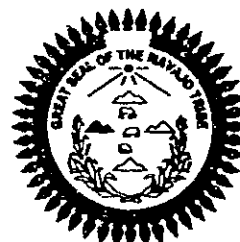
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PKH

THE NAVAJO TRIBE  
WINDOW ROCK, ARIZONA  
MINERALS DEPARTMENT

RAYMOND NAKAI  
CHAIRMAN, Navajo Tribal Council

NELSON DAMON  
VICE CHAIRMAN, Navajo Tribal Council



September 22, 1969

Mr. John Bannister  
Arizona Oil and Gas Conservation Commission  
1624 West Adams, Room 202  
Phoenix, Arizona 85007

Dear John:

The following is a suggested release to P.I. and other agencies concerning the Peabody water wells at Black Mesa:

OIL AND GAS SHOWS REPORTED

The Arizona Oil and Gas Conservation Commission has released all <sup>available</sup> information concerning six deep water wells drilled since 1965 in the Black Mesa area, Navajo County, Arizona, on the Navajo Reservation, by *Peabody Coal Co.*

Shows of oil and gas were encountered in the Dakota during the drilling of one well which had 43 feet of indicated log porosity. A heavy oil scum covered the mud pits, and gas bubbles were visible in the flow line. No shows were reported in the other five wells. All of the wells exhibit considerable structural deformation, and all penetrated the Coconino formation.

A packet of information containing logs and a location plat is available from Gallup Blueprint & Engineering Corp., 303 South 2nd St., Gallup, New Mexico 87301. Telephone No. (505) 863-9396.

We have this date loaned the sepias of these logs, and a location plat, to Gallup Blueprint. The packet of material they will supply includes one copy each of all logs and the location plat.

We certainly appreciate your assistance in this matter.

Sincerely,

*Perry K. Hurlbut*  
Perry K. Hurlbut  
Minerals Supervisor



THE NAVAJO TRIBE  
WINDOW ROCK, ARIZONA  
MINERALS DEPARTMENT

RAYMOND NAKAI  
CHAIRMAN, Navajo Tribal Council

NELSON DAMON  
VICE CHAIRMAN, Navajo Tribal Council



August 8, 1969

Mr. James Scurlock  
Arizona Oil and Gas Conservation Commission  
1624 West Adams, Room 202  
Phoenix, Arizona 85007

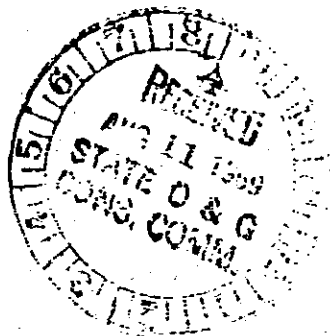
Dear Mr. Scurlock:

The correct log top for the Pdc in the Peabody  
#1 water well at Black Mesa is 4963. Measured from the KB  
of 6403, this results in a datum of + 1440.

The other five wells did not penetrate the Pdc.  
However, if you are interested I can give you the Kd  
datums.

Sincerely yours,

*Perry K. Hurlbut*  
Perry K. Hurlbut  
Minerals Supervisor



# Peabody

#1 C-20-36N-18E

2, SE SE ~~SE~~ " "

3, SWNW 14-35N-18E

4. NE NW 16-35N-18E

5. NE SW 34-36N-18E

6. C.N. N. 26-36N-18E

Elev:

1 6403 KB

2 6552 KB

3 6458 KB

4 6241 KB

5 6606 KB

~~6606 KB~~

6. 6686 KB

211

T.D.

1- 5149

2. 3642

3. ~~3742~~ 3602

4. 3527

5. 3742

6. 3564